April 7, 2003

Mr. Jason Conrad
Koch Materials Company
2820 East Durbin Street
Warsaw, IN 46580

Dear Mr. Conrad:

Re: Re- Registration No.
085-16930-00066

The application from Koch Materials, received on March 18, 2003, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following emission units, to be located at 2820 East Durbin Street, Warsaw, Indiana, is classified as registered:

One (1) boiler, fueled by natural gas only, identified as B-1, heat capacity is 5.02 mmBtu per hour. Stack height is 15 feet with a diameter of 24 inches.

One (1) hot water heater, fueled by natural gas only, identified as WH-1, heat capacity is 3.0 mmBtu per hour. Two (2) stacks each having a height of 13 feet with a diameter of 16 inches.

One (1) hot oil heater, fueled by natural gas only, identified as HO-1, heat capacity is 8.4 mmBtu per hour. Stack height is 15 feet with a diameter of 24 inches.

One (1) direct-fire immersion heater, fueled by natural gas only, identified as IM-1, heat capacity is 1.25 mmBtu per hour. Stack height is 22 feet with a diameter of 10.75 inches.

One (1) direct-fire immersion heater, fueled by natural gas only, identified as IM-2, heat capacity is 1.72 mmBtu per hour. Stack height is 33 feet with a diameter of 10.75 inches.

One (1) direct-fire immersion heater, fueled by natural gas only, identified as IM-3, heat capacity is 1.72 mmBtu per hour. Stack height is 33 feet with a diameter of 10.75 inches.

One (1) loading rack, product name is asphalt emulsion.

One (1) loading rack, product name is polymer modified asphalt.

Four emulsion loading racks, identified as 1, 2, 3, and 4

Three (3) railcar unloading spots.

Fugitive emissions from vehicular traffic on paved roadways.

Storage Tanks:

Tank 101: storing asphalt cement, with a storage capacity of 20,080 gallons, with a diameter of 10.5 feet and height of 31.0 feet.

Tank 102: storing asphalt cement, with a storage capacity of 82,751 gallons, with a diameter of 29.67 feet and height of 16.0 feet.

Tank 103: storing asphalt cement, with a storage capacity of 82,751 gallons, with a diameter of 29.67 feet and height of 16.0 feet.

Tank 104: storing asphalt cement, with a storage capacity of 167,996 gallons, with a diameter of 29.89 feet and height of 32.0 feet.

Tank 105: storing asphalt cement, with a storage capacity of 489,002 gallons, with a diameter of 51.0 feet and height of 32.0 feet.

Tank 106: storing asphalt cement, with a storage capacity of 489,002 gallons, with a diameter of 51.0 feet and height of 32.0 feet.

Tank 107: storing asphalt cement, with a storage capacity of 24,614 gallons, with a diameter of 10.5 feet and height of 38.0 feet.

Tank 108: storing asphalt cement, with a storage capacity of 4,219,783 gallons, with a diameter of 134 feet and height of 40 feet.

Tank 120: storing asphalt cement, with a storage capacity of 24,614 gallons, with a diameter of 10.5 feet and height of 38.0 feet.

Tank 140: storing asphalt cement batch, with a storage capacity of 2159 gallons, with a diameter of 7.0 feet and height of 7.5 feet.

Tank 150: storing asphalt cement batch, with a storage capacity of 24,065 gallons, with a diameter of 16.0 feet and height of 16.0 feet.

Tank 201: storing asphalt emulsion, with a storage capacity of 44,529 gallons, with a diameter of 15.39 feet and height of 32.0 feet.

Tank 202: storing asphalt emulsion, with a storage capacity of 44,529 gallons, with a diameter of 15.39 feet and height of 32.0 feet.

Tank 203: storing asphalt emulsion, with a storage capacity of 44,529 gallons, with a diameter of 15.39 feet and height of 32.0 feet.

Tank 204: storing asphalt emulsion, with a storage capacity of 44,529 gallons, with a diameter of 15.39 feet and height of 32.0 feet.

Tank 205: storing asphalt emulsion, with a storage capacity of 40,304 gallons, with a diameter of 14.0 feet and height of 35.0 feet.

Tank 206: storing asphalt emulsion, with a storage capacity of 40,304 gallons, with a diameter of 14.0 feet and height of 35.0 feet.

Tank 207: storing asphalt emulsion, with a storage capacity of 65,179 gallons, with a diameter of 21.5 feet and height of 24.0 feet.

Tank 208: storing asphalt emulsion, with a storage capacity of 65,179 gallons, with a diameter of 21.5 feet and height of 24.0 feet.

Tank 210: storing asphalt emulsion, with a storage capacity of 124,127 gallons, with a diameter of 29.67 feet and height of 24.0 feet.

Tank 211: storing asphalt emulsion, with a storage capacity of 33,397 gallons, with a diameter of 15.39 feet and height of 24.0 feet.

Tank 212: storing asphalt emulsion, with a storage capacity of 48,129 gallons, with a diameter of 16.0 feet and height of 32.0 feet.

Tank 400: storing fuel oil, with a storage capacity of 20,080 gallons, with a diameter of 10.5 feet and height of 31.0 feet.

Tank 401: storing LD-95, with a storage capacity of 10,364 gallons, with a diameter of 10.5 feet and height of 16.0 feet.

Tank 410: storing asphalt emulsion, with a storage capacity of 10,364 gallons, with a diameter of 10.5 feet and height of 16.0 feet.

The following conditions shall be applicable:

(1) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuos opacity monitor in a six (6) hour period.

(2) Tanks 102, 103, 201, 202, 203, 204, 205, 206, 207, 208, 210 and 212 are subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.110, Subpart K). There are no applicable requirements for these tanks.

(3) Pursuant to the New Source Performance Standard 326 IAC 12, (40 CFR 60.110b, Subpart Kb), storage tanks # 108, 150, and 212 are subject to the following: the owner or operator shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

(4) Pursuant to 326 IAC 6-4-2 (Fugitive Dust Emission Limitations), the Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,
Original signed by Paul Dubenetzky

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

mm

cc: File - Kosciusko County
Kosciusko County Health Department
Air Compliance - Doyle Houser
Northern Regional Office
Permit Tracking
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Registration

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3)

Company Name: Koch Materials Company
Address: 2820 East Durbin Street
City: Warsaw, IN 46580
Authorized individual:
Phone #:
Registration #: 085-16930-00066

I hereby certify that **Koch Materials Company** is still in operation and is in compliance with the requirements of Registration **085-16930-00066**.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Re-registration

Source Background and Description

Source Name:	**Koch Materials Company**
Source Location:	**2820 E. Durbin Street, Warsaw, IN 46580**
County:	**Kosciusko**
SIC Code:	**2952**
Operation Permit No.:	**085-16930-00066**
Permit Reviewer:	**Madhurima D. Moulik**

The Office of Air Quality (OAQ) has reviewed an application from Koch Materials Company relating to the addition of two (2) 40,304 gallon asphalt emulsion tanks, to be identified as Tanks 205 and 206. In addition, three (3) existing tanks, identified as Tanks 205, 206, and 209 have been removed. The source currently includes the following emission units:

One (1) boiler, fueled by natural gas only, identified as B-1, heat capacity is 5.02 mmBtu per hour. Stack height is 15 feet with a diameter of 24 inches.

One (1) hot water heater, fueled by natural gas only, identified as WH-1, heat capacity is 3.0 mmBtu per hour. Two (2) stacks each having a height of 13 feet with a diameter of 16 inches.

One (1) hot oil heater, fueled by natural gas only, identified as HO-1, heat capacity is 8.4 mmBtu per hour. Stack height is 15 feet with a diameter of 24 inches.

One (1) direct-fire immersion heater, fueled by natural gas only, identified as IM-1, heat capacity is 1.25 mmBtu per hour. Stack height is 22 feet with a diameter of 10.75 inches.

One (1) direct-fire immersion heater, fueled by natural gas only, identified as IM-2, heat capacity is 1.72 mmBtu per hour. Stack height is 33 feet with a diameter of 10.75 inches.

One (1) direct-fire immersion heater, fueled by natural gas only, identified as IM-3, heat capacity is 1.72 mmBtu per hour. Stack height is 33 feet with a diameter of 10.75 inches.

One (1) loading rack, product name is asphalt emulsion.

One (1) loading rack, product name is polymer modified asphalt.

Four (4) emulsion loading racks, identified as 1, 2, 3, and 4.

Three (3) railcar unloading spots.

Fugitive emissions from vehicular traffic on paved roadways.

Storage Tanks:

Tank 101: storing asphalt cement, with a storage capacity of 20,000 gallons, with a diameter of 10.5 feet and height of 31.0 feet.

Tank 102: storing asphalt cement, with a storage capacity of 84,000 gallons, with a diameter of 29.67 feet and height of 16.0 feet.

Tank 103: storing asphalt cement, with a storage capacity of 84,000 gallons, with a diameter of 29.67 feet and height of 16.0 feet.

Tank 104: storing asphalt cement, with a storage capacity of 168,000 gallons, with a diameter of 29.89 feet and height of 32.0 feet.

Tank 105: storing asphalt cement, with a storage capacity of 500,000 gallons, with a diameter of 51.0 feet and height of 32.0 feet.

Tank 106: storing asphalt cement, with a storage capacity of 500,000 gallons, with a diameter of 51.0 feet and height of 32.0 feet.

Tank 107: storing asphalt cement, with a storage capacity of 24,681gallons, with a diameter of 10.5 feet and height of 38.0 feet.

Tank 108: storing asphalt cement, with a storage capacity of 4,219,783 gallons, with a diameter of 134 feet and height of 40 feet.

Tank 120: storing asphalt cement, with a storage capacity of 25,000 gallons, with a diameter of 10.5 feet and height of 38.0 feet.

Tank 140: storing asphalt cement batch, with a storage capacity of 1,500 gallons, with a diameter of 7.0 feet and height of 7.5 feet.

Tank 150: storing asphalt cement batch, with a storage capacity of 24,000 gallons, with a diameter of 16.0 feet and height of 16.0 feet.

Tank 201: storing asphalt emulsion, with a storage capacity of 42,000 gallons, with a diameter of 15.39 feet and height of 32.0 feet.

Tank 202: storing asphalt emulsion, with a storage capacity of 42,000 gallons, with a diameter of 15.39 feet and height of 32.0 feet.

Tank 203: storing asphalt emulsion, with a storage capacity of 42,000 gallons, with a diameter of 15.39 feet and height of 32.0 feet.

Tank 204: storing asphalt emulsion, with a storage capacity of 42,000 gallons, with a diameter of 15.39 feet and height of 32.0 feet.

Tank 205: storing asphalt emulsion, with a storage capacity of 40,304 gallons, with a diameter of 14.0 feet and height of 35.0 feet.

Tank 206: storing asphalt emulsion, with a storage capacity of 40,304 gallons, with a diameter of 14.0 feet and height of 35.0 feet.

Tank 207: storing asphalt emulsion, with a storage capacity of 63,000 gallons, with a diameter of 21.5 feet and height of 24.0 feet.

Tank 208: storing asphalt emulsion, with a storage capacity of 63,000 gallons, with a diameter of 21.5 feet and height of 24.0 feet.

Tank 210: storing asphalt emulsion, with a storage capacity of 124,000 gallons, with a diameter of 29.67 feet and height of 24.0 feet.

Tank 211: storing asphalt emulsion, with a storage capacity of 31,500 gallons, with a diameter of 15.39 feet and height of 24.0 feet.

Tank 212: storing asphalt emulsion, with a storage capacity of 48,000 gallons, with a diameter of 16.0 feet and height of 32.0 feet.

Tank 400: storing fuel oil, with a storage capacity of 20,135 gallons, with a diameter of 10.5 feet and height of 31.0 feet.

Tank 401: storing LD-95, with a storage capacity of 10,410 gallons, with a diameter of 10.5 feet and height of 16.0 feet.

Tank 410: storing asphalt emulsion, with a storage capacity of 20,135 gallons, with a diameter of 10.5 feet and height of 16.0 feet.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) Registration No. 085-6192-00066, issued on December 20, 2001.

(b) Exemption No. 085-16631-00066, issued on October 30, 2002.

(c) Registration No. 085-16440-00066, issued on December 10, 2002.

The source's potential to emit of all criteria pollutants, including the fugitive emissions from vehicular traffic on paved roads and emissions from the railcar unloading system, which were not included in the Exemption No. 085-16631-00066, are above the exemption levels as listed in 326 IAC 2-1.1-3(d), and less than 25 tons per year. Therefore, re-registration No. 085-16440-00066 was issued to the source. The registration status of the source remains unchanged as a result of the latest modifications to the storage tanks.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on March 18, 2003.

Emission Calculations

The emissions from combustion units and existing storage tanks are based on calculations

included in Technical Support Document for Registration No. 085-16440-00066. The emissions from the new storage tanks 205 and 206 are based on tank emissions calculations submitted by source.

Emissions from Combustion Source:

Emissions in tons/yr

	PM	PM-10	SO2	NOx	VOC	CO
Combustion Units (21.0 mmBTU/hr total)	0.7	0.7	0.1	9.2	0.5	7.7

Tank Emissions:

PTE of VOCs = 7.05 tons/yr

The tank modifications for Tanks 205 and 206, and the removal of Tank 209 are estimated to have negligible effect on the PTE.

Fugitive Emissions: Paved Roads

No. of trucks per year = 105,066 = 288 per day
Therefore, it is a low ADT (average daily traffic) road (as defined in AP-42)

Vehicle weight = 26.5 tons

Vehicle miles traveled per year (VMT) = 52,533 miles

Fugitive Emissions E = k (sL/2)^0.65 x (W/3)^1.5 x (1-P/4N) (lb/VMT) (AP-42, October 2002)

Where:

k = Particle size empirical constant = 0.082 for PM and 0.016 for PM-10
sL = Road surface silt loading = 0.4 grams/m^2 (AP-42, October 2002, Table 13.2.1-2)
W = Vehicle weight in tons
P = no. of days with at least 0.254 mm of precipitation in averaging period
N = no. of days in averaging period

P (in Indiana) = 120 days (Figure 13.2.1-2, AP-42, October 2002)
N = 365 days

E (PM) = 0.082 x (0.4/2)^0.65 x (26.5/3)^1.5 x (1-120/(365x4))
= 0.082 x 0.35 x 26.24 x (1- 0.082) = 0.69 lb/VMT = 0.69 x 52533/2000 tons per year = 18.2 tpy

E (PM-10) = 0.016 x (0.4/2)^0.65 x (26.5/3) ^ 1.5 x (1-0.082) = 0.135 lb/VMT = 3.54 tpy

Potential to Emit **(Fugitive Emissions)**: **PM = 18.2 tons per year**
PM-10 = 3.54 tons per year

Tank Emissions and Railcar Loading Emissions:

The tank emissions and railcar loading emissions are based on the emission calculations submitted by the source.

VOC (tanks) = 7.05 tons per year
VOC (Railcar loading) = 3.77 tons per year

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	18.9
PM-10	18.9
SO_2	0.1
VOC	11.3
CO	7.7
NO_x	9.2

HAP's	Potential To Emit (tons/year)
Single HAP	<10
TOTAL	***<25***

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM and PM-10 is greater than 5 tons per year but less than 25 tons per year, and the potential to emit of VOC is greater than 10 tons per year but less than 25 tons per year. Therefore, pursuant to 326 IAC 2-5.5-1, a registration will be issued.

County Attainment Status

The source is located in Kosciusko County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore,

VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Kosciusko County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21. See the State Rule Applicability for the source section.

(b) Kosciusko County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21. See the State Rule Applicability for the source section.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

Federal Rule Applicability

(a) This source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.90, Subpart I, Standards of Performance for Hot Mix Asphalt Facilities), because this source is not a hot mix asphalt plant.

(b) The storage tanks at the source identified as 102, 103, 201, 202, 203, 204, 205, 206, 207, 208, 210, 212 are subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.110, Subpart K), because the tanks have capacities greater than 40,000 gallons, and were constructed within the applicability dates from June 11, 1973 to May 19, 1978. However, there are no applicable requirements, as the true vapor pressure of the liquid stored at these tanks is less than 1.0 psia. The other storage tanks that were constructed within the applicability dates have storage capacities below 40,000 gallons.

(c) The storage tanks identified as Tanks # 108, 150, 212, storing volatile organic liquids, with a storage capacity greater than 40 cubic meters, and were constructed or modified after July 23, 1984, are subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.110b, Subpart Kb). With a maximum storage capacity each of less than 151 cubic meter, the following shall apply, pursuant to 326 IAC 60.116b: The owner or operator shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

(d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Kosciusko County and the potential to emit of all criteria pollutants is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

This source has the potential to emit of less than 10 tons per year of a single HAP or 25

tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-2 (Prevention of Significant Deterioration)

This potential to emit of all criteria pollutants from this source are less than 250 tons per year, and it is not of the twenty-eight listed source categories. Therefore, 326 IAC 2-2 does not apply.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 2-5.1-2 (Registration)

Pursuant to 326 IAC 2-5.1-2(f)(3), an authorized individual shall provide an annual notification to the department that the source is in operation and in compliance with the registration.

State Rule Applicability - Individual Facilities

326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)

All tanks at this source are exempt from 326 IAC 8-4-3, because the true vapor pressure in each tank is less than 1.52 psi.

326 IAC 6-4-2 (Fugitive Dust Emissions Emission Limitations)

Pursuant to 326 IAC 6-4-2, the Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

Pursuant to 326 IAC 6-5-1, any new source of fugitive particulate matter emissions, located anywhere in the state, requiring a permit as set forth in 326 IAC 2, which has not received all the necessary preconstruction approvals before December 13, 1985, are subject to 326 IAC 6-5. The source emissions are at registration levels only, therefore, the source is not subject to this rule.

Conclusion

The operation of this source shall be subject to the conditions of the attached proposed re-registration No. 085-16930-00066.